

## Enhanced mechanical properties of hBN-ZrO<sub>2</sub> composites and their biological activities on *Drosophila melanogaster*: Synthesis and characterizations

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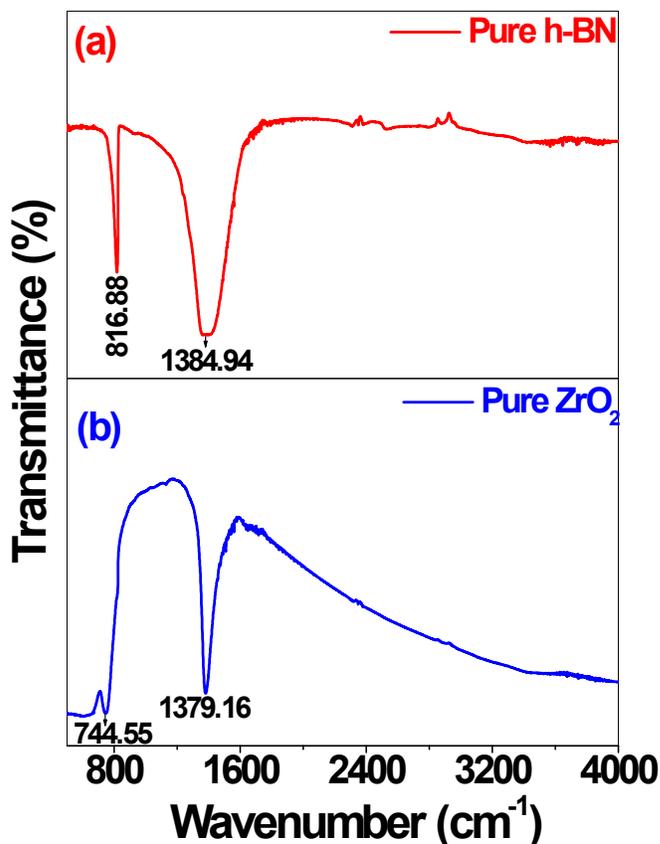


Fig. 1S: IR spectra of (a) pure hexagonal boron nitride (h-BN) and (b) pure zirconia (ZrO<sub>2</sub>) recorded at room temperature.

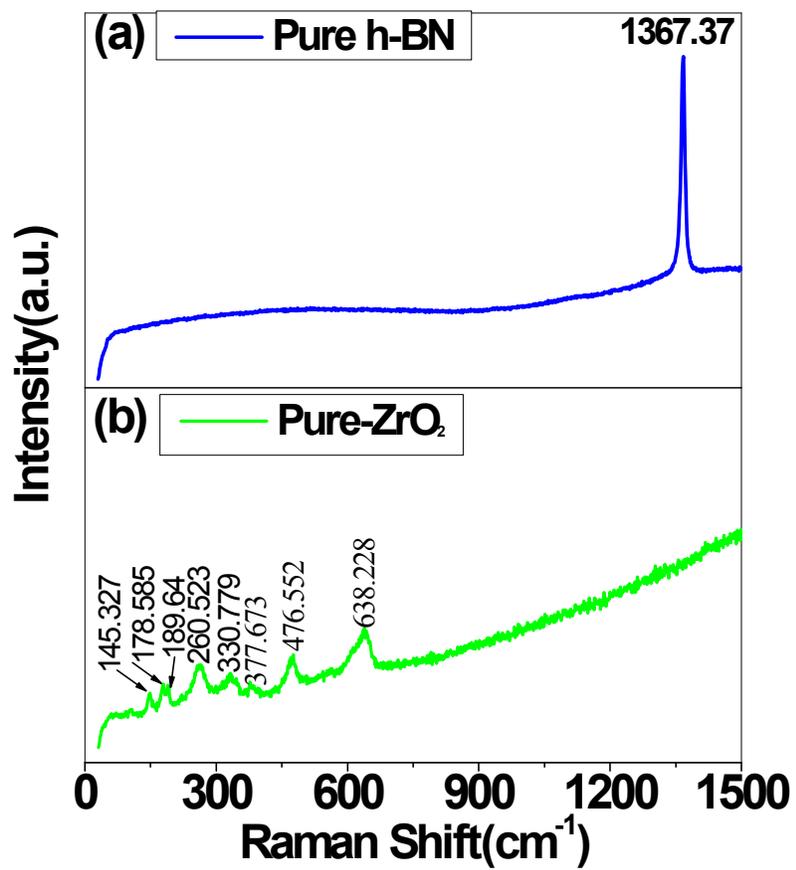
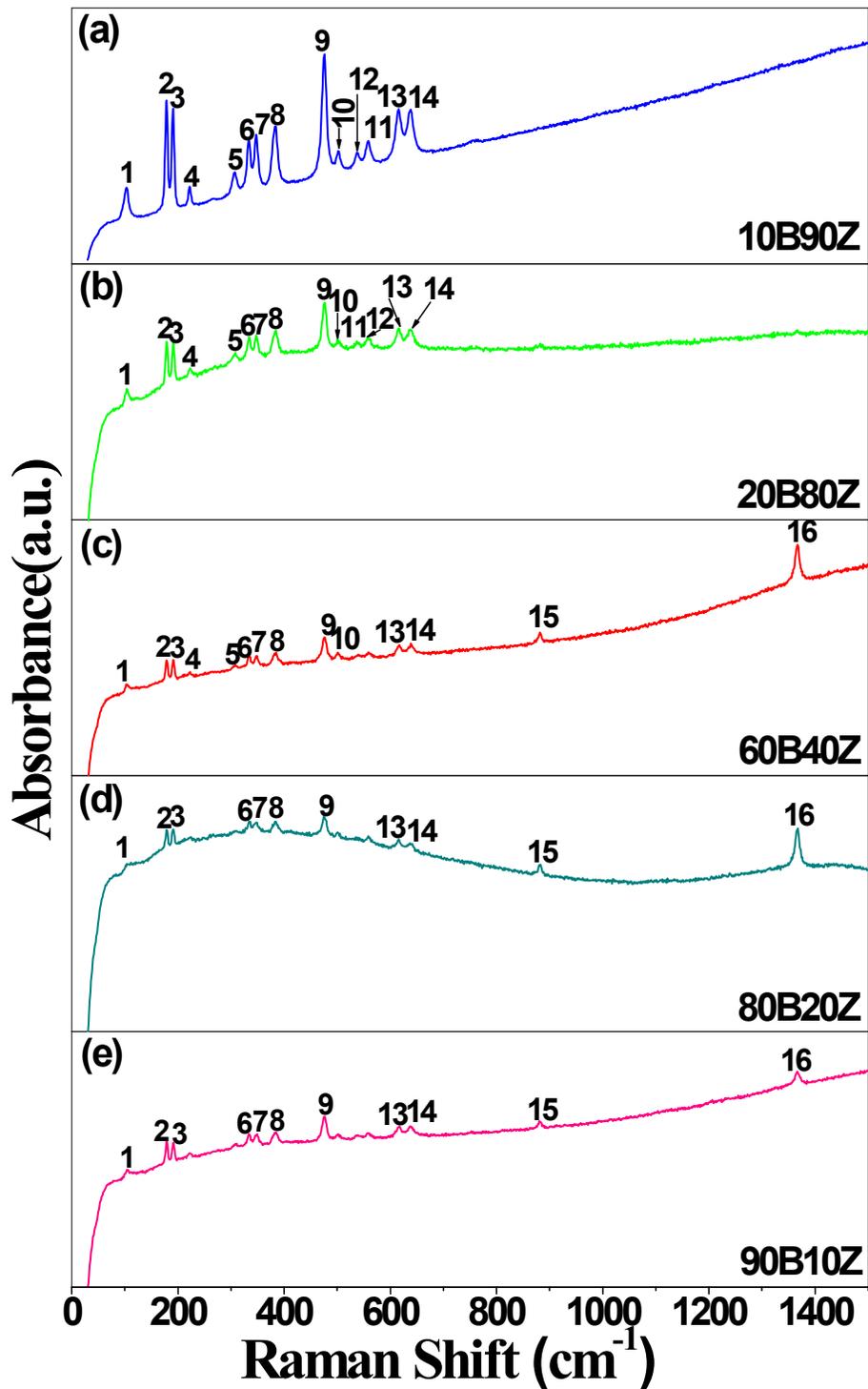


Fig. 2S: Raman spectrum of (a) pure hexagonal boron nitride (h-BN) and (b) pure zirconia (ZrO<sub>2</sub>) recorded at room temperature.



**Figure 3S.** Raman spectra of hBN-ZrO<sub>2</sub> composite samples (a) 10B90Z, (b) 20B80Z, (c) 60B40Z, (d) 80B20Z and (e) 90B10Z sintered at 1000 °C for 3 h.